



Engineering +
Environmental

Mr. John Wallace
University of Washington
Environmental Health & Safety
Box 354110
Seattle, Washington

March 27, 2012

RE: **Final Report UW J Wing Transformer Decommissioning – Wipe Test**
University of Washington, UW Project No. 202696
PBS Project Number 40035.360



Dear Mr. Wallace:

At the request of the University of Washington (UW), PBS Engineering + Environmental (PBS) was requested to provide post wipe sampling for potential PCB contaminated concrete and equipment as part of the demolition of the existing transformers situated at the UW Health Science Center J wing. PCB-containing and contaminated product and equipment were disposed off by the Owner per 40 CFR 761 Sub Part K of the federal codes.

PROJECT INFORMATION

Prior dielectrics cooling oil sampling in January 2005 completed by the UW Environmental Health and Safety Department (UW EHS) identified the following PCB-containing cooling oil in specific transformers at the following UW facilities impacted by this transformer replacement project:

UW Building and Transformer Number	Sample Results - PCB Concentration	Date Analyzed
J wing Electrical Room – 148 TR 1	12 parts per million (ppm)	1/13/2005
J wing Electrical Room – 148 TR 2	46 ppm	1/13/2005
J wing Electrical Room – 148 TR 3	10 ppm	1/13/2005

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POST TRANSFORMER REMOVAL – WIPE SAMPLING RESULTS AND FINDINGS

In December 2010 BN Builders was contracted by the UW Capital Projects Office to complete the removal of the designated transformers from the J wing transformer room located in the basement (minus two) level of the Health Science Center. The scope was completed as part of the J1/J2 Microbiology remodel in December 9, 2010. Prior to removal, the three transformers were prepared by the contractor, de-energized and the equipment was off-lined and set aside within the transformer room. The transformers were then purged of oil product and the waste oil subsequently drummed for proper shipment and disposal by the UW ES & S. The cleanup contractor of the transformer room concrete slab surface was Performance Abatement Services of Seattle, Washington. Following the removal of the transformer carcass/equipment and cleanup of the concrete surface, wipe sampling of the concrete footprint was completed by PBS to determine if floor staining (observed present on concrete slab) contain residual PCB concentration. In December 10, 2010, wipe sampling results from the concrete footprint of the transformers tested non-detect for PCBs (below 10 µg/100 cm²). Therefore less than the EPA's @TSCA clean-up levels. The area was accepted as cleaned by the UW based on the basis of the laboratory analytical results of 12/10/2010.

Upon surface cleanup by the contractor and based on visual assessment of the footprint that no contamination or surface staining was noted and in conjunction with the wipe analytical sampling results, no contamination of the concrete slab was present.

The following table summarized the post sampling results per transformer removed from the J wing:

J Wing Transformer Room	PCB Concentration & Comments	Lab Analysis Date
J wing Transformer Room – 148 TR 1 – concrete slab foot print of removed transformer	Surface Wipe test: Non-Detect (ND) for PCBs – no further testing required and cleanup accepted.	12/10/2010
J wing Transformer Room – 148 TR 2 – concrete slab foot print of removed transformer	Surface Wipe test: ND for PCBs – no further testing required and cleanup accepted.	12/10/2010
J wing Transformer Room – 148 TR 3 – concrete slab foot print of removed transformer	Surface Wipe test: ND for PCBs – no further testing required and cleanup accepted.	12/10/2010

Post laboratory wipe sampling results for the transformer footprints are found in Appendix B. All samples were cooled in an iced cooler until released to the project laboratory within the holding time for the specified constituents. Samples were transported to Advanced Analytical in Redmond, Washington, with chain-of-custody documentation. Surface wipe analyses were completed for PCBs using EPA Method 8082.

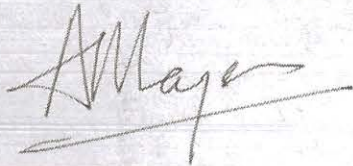
In addition, in May 2010, three soil borings were advanced in the J wing transformer room (adjacent to existing transformers 1, 2, and 3) to determine the soil profile/backgrounds for PCBs. Borings were advanced through the typical slab depth of 12 inches. The soil sample below the slab in each boring was collected using a ½-inch diameter hollow rod, which was advanced into the undisturbed soil to a depth of approximately 3 inches. Each respective soil sample was placed into a 4-ounce jar. No concentrations of PCBs were detected above laboratory reporting limits in any of the soil samples obtained from the J wing transformer room. The transmittal report of soil sampling prepared by PBS was dated May 7, 2010 and is provided under a separate transmittal cover.

DISPOSAL/RECYCLING

Waste cooling oil from the J wing three transformers was properly deposited into 55-gallon DOT approved lidded drums and labeled. According to the contractor, personnel protective equipment (PPE) such as disposable booties, disposable hooded suits, gloves etc. were also drummed (in 55-gallon lidded containers). Drummed waste oil and PPE were removed and transported by Clean Harbors Environmental Services Inc. to Clean Harbors Aragonite LLC for proper recycling, incineration and landfill. The waste manifests and certificates of recycling/disposal are found in Appendix B as part of the attachment.

We appreciate this opportunity to submit this report and look forward to continuing to support the University of Washington on future projects. Should you have any questions please contact the undersigned at (206) 233-9639.

Sincerely,



Willem A. Mager
Project Manager

Appendix A – Post wipe/bulk sampling analysis results

Appendix B – Waste Manifests & Certificates of Disposal – Provided By Owner (UW)